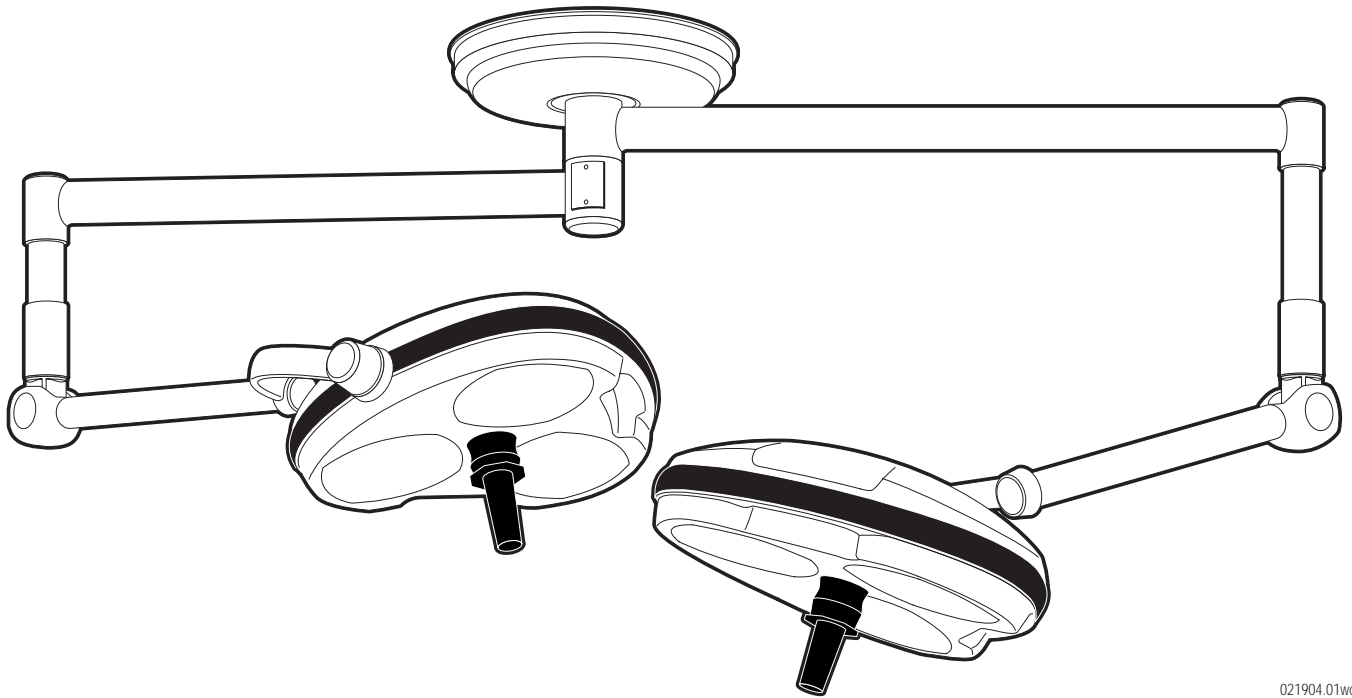


INSTALLATION INSTRUCTIONS



021904.01wc

ST19-WC

SERIES SURGICAL LIGHTS

EQUIPMENT LABELS AND SPECIFICATIONS



ATTENTION, CONSULT MANUAL FOR FURTHER INSTRUCTIONS.
INDICATES SPECIAL USER ATTENTION.



AC VOLTAGE



FUSE TYPE 3 AMP, SLOW BLOW TYPE



CLASS I DEFIBRILLATION PROOF, TYPE B EQUIPMENT- IPX4 RATED.
INTERNALLY POWERED EQUIPMENT

FOR DRY LOCATIONS

UNIT TO BE USED ONLY IN SPECIFIED ENVIRONMENTAL CONDITIONS

TEMPERATURE: 15° - 30° C (60° -85° F)

HUMIDITY: 30% - 60% RELATIVE HUMIDITY, NON CONDENSING

ENTECLA CERTIFIED

TO UL2601-1

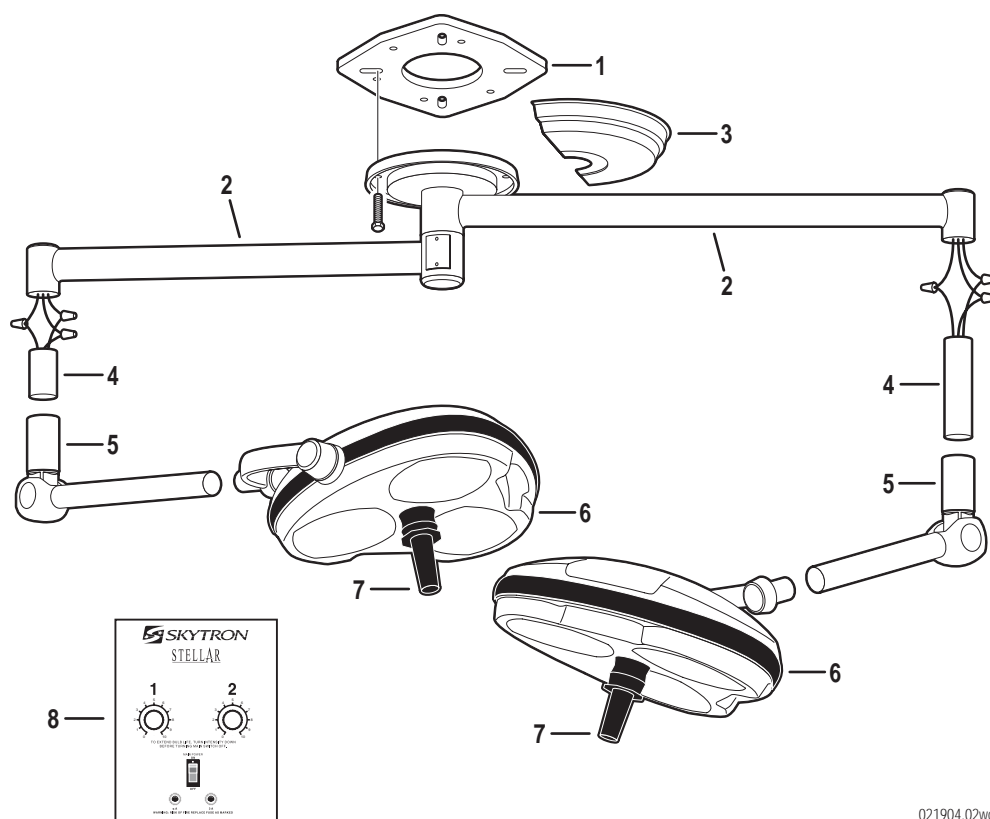
CAN/CSA601.1, IEC 60601-2-46



TOOLS REQUIRED:

3/8" DRIVE RATCHET
ALLEN WRENCH SET-METRIC
(2) STEP LADDERS
3/4" DEEP SOCKET, 3/8" DRIVE
#2 PHILLIPS HEAD SCREW DRIVER
UTILITY KNIFE
WIRE CUTTERS

CRIMP PLIERS
DIGITAL LEVEL
TRUE RMS MULTIMETER
PORTABLE LIFT, 750LB. CAPACITY
12" ADJUSTABLE WRENCH
SLOTTED HEAD SCREWDRIVER 1/4"
PUNCHSET 1/8" - 3/8"



021904.02wc

TYPICAL INSTALLATION SEQUENCE / COMPONENT IDENTIFICATION

- | | |
|--------------------------------|------------------------------------|
| 1. Mounting Plate | 5. Balance Mechanism (BOM) |
| 2. Radial Arm Assembly (RAA) | 6. Lighthead |
| 3. Ceiling Cover | 7. Sterilizable Positioning Handle |
| 4. Vertical Support Tube (VST) | 8. Wall Control |

INSTALLATION NOTES

- The SKYTRON Surgical Lighting Fixture is normally shipped in two to three crates, depending on the model. A carton containing the Vertical Support Tubes, miscellaneous hardware, and various instructional materials is packed separately.

- Follow the Installation Instructions and utilize the Installation Check List to assure proper installation.

- Special adapter plates for mounting SKYTRON surgical lights on existing mounting structures are available. Contact your SKYTRON representative for special application details.

- Additional materials required for proper installation include Blue Loc-Tite compound.

- Stellar ST19WC Series lighting fixtures require a wall mounted control box (8" x 10"). 3/4" conduit and minimum 12 AWG wire is required between wall control and fixture. 10 AWG wire is recommended for installations requiring wires between control box and fixture that are longer than 25'.

- Contact SKYTRON representative for Seismic calculations if applicable.

IMPORTANT NOTES

UNCRATING

- Should any damage to the fixture be noted while uncrating, further unpacking should be stopped and the container with all the wrappings held for inspection. The transportation company should be notified immediately so an inspector can be sent. Consult the Damaged Shipment Claim Procedure sheet for further details.

- Personnel uncrating SKYTRON surgical lights should be aware that they are delicate medical equipment and special care in handling should prevail throughout installation.

LIGHTHEADS

- Use extreme caution when removing the contents from the crates to prevent damage to the lights. Leave the lightheads in their crates until ready to install.

- If the lighthead must be set down after it is removed from the crate, always lay it on the front face. If available, lay it on the foam shipping block. Do not lay it on the front face.

UNCRATING PROCEDURE

Open the top of the lighthead box and remove the packing material, remove the sterilizable positioning handle and remove lighthead from the crate.

NOTE

Details may vary depending upon model and support structure fabrication.

ALL fixtures use METRIC fasteners.

INSTALLATION PROCEDURE

The lighting fixture should be installed in the following sequence:

1. Mounting Plate

2. Radial Arm Assembly and Ceiling Cover
3. Vertical Support Tubes/ Balance Mechanisms
4. Lightheads
5. Wall Control

1. Mounting Plate

a. Check the strength and stability of the mounting structure. It should be fabricated of steel and welded or bolted to the structural ceiling. It should be braced in a manner that will allow no twisting or lateral motion. A steel stiffener plate should be used to connect the 3/4" diameter "all-thread" support rods and to provide an attachment base for the angle-iron sway bracing. The 3/4" diameter support rods should be mounted in a 9-1/2" square pattern and should extend 2-1/4" below the finished ceiling. **See Mounting Structure details in the back of this booklet.**

b. Install the SKYTRON mounting plate on the threaded rods between jam nuts. The plate should normally be located 1-1/4" off the finished ceiling (measured from the bottom of the plate) and accurately leveled, within 0.1 degree, using a digital level. Tighten the jam nuts securely. See figure 1.



WARNING



The mounting plate must be accurately leveled to prevent lighthead drift.

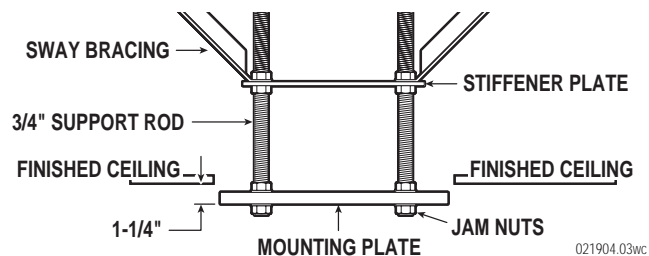


Figure 1. Mounting Plate Installation

Consult specific Seismic calculations if applicable.

NOTE

On recessed mounts, extended mounts, or adapter situations, the mounting plate will NOT be placed 1-1/4" off the finished ceiling. A special drawing will be included in the installation package to cover these applications.

2. Radial Arm Assembly and Ceiling Cover

NOTE

- The multiple arm assemblies are easier to handle during installation if the arms are left taped and tied together.
- In some cases it may be necessary to connect the electrical wires from the wall control to the radial arm junction box before the arm assembly can be bolted to the mounting plate.

- a. Install the Radial Arm Assembly(RAA) onto the mounting plate using the bolts provided. Tighten the mounting bolts securely.

NOTE

Radial Arm wires are tagged for proper connection to the Wall Control (top arm #1, next arm #2).

- b. Observe wire tags and color codes and connect the electrical wires from the wall control to the radial arm junction box wires.

NOTE

Connection of the fixture wires using Crimp Connectors is recommended due to the low voltage/high amperage electrical requirements.

- c. Install the ceiling cover and secure. See figure 2.

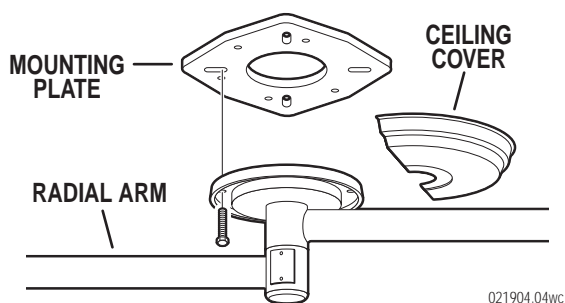


Figure 2. Radial Arm Installation

3. Vertical Support Tubes/Balance Mechanism

NOTE

Determine correct placement for each Balance Mechanism(BOM)/Vertical Support Tube(VST) on the radial arm assembly. The longest VST goes into the top radial arm.



WARNING



Apply Loc-Tite to all of the 5mm mounting screws and use a 3mm allen wrench to tighten the screws.

- a. Install the VST on the BOM, apply Loc-Tite to screw threads and secure VST with the allen screws provided. See figure 3.

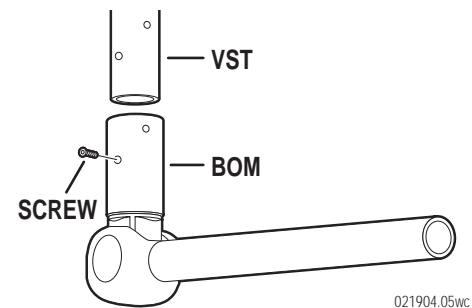


Figure 4. Balance Mechanism

b. Observe the wire colors and connect the wires from the radial arm to the corresponding BOM/VST wires using crimp connectors. See figure 4.

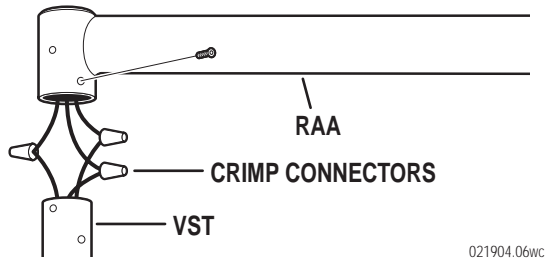


Figure 4. VST to RAA Installation

c. Insert the vertical support tube into the radial arm receptacle. Observe any screw color codes, apply Loc-Tite to screw threads, and secure the BOM/VST assembly with the 5mm mounting screws. Repeat procedure for any remaining BOM/VST assemblies.

4. Lighthead

a. To make it easier to install the lighthead, locate the support arm of the balance mechanism so that it points inward toward the ceiling cover. This will prevent the radial arm from moving when installing the lighthead. See figure 5.

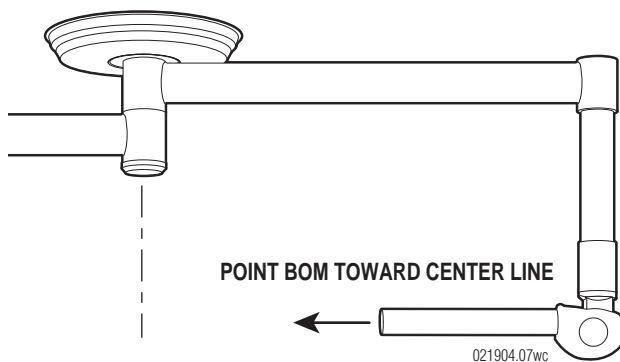


Figure 5.

b. Remove the four (4) screws from the lighthead mounting stub.

c. Install the lighthead mounting collar onto the support arm and secure with the screws previously removed. See figure 6.

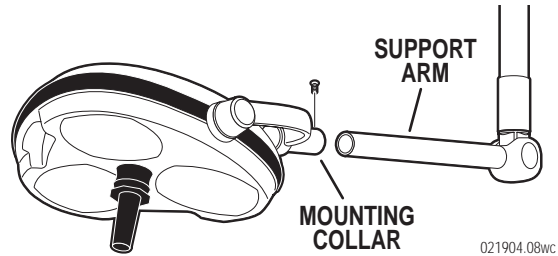


Figure 6. Lighthead Installation

d. Pull the lighthead down and remove the Above Horizontal Limit Stops from the BOM. See figure 7.



WARNING



DO NOT remove lighthead when support arm is in down position; The balance mechanism will be severely damaged and may result in bodily injury.

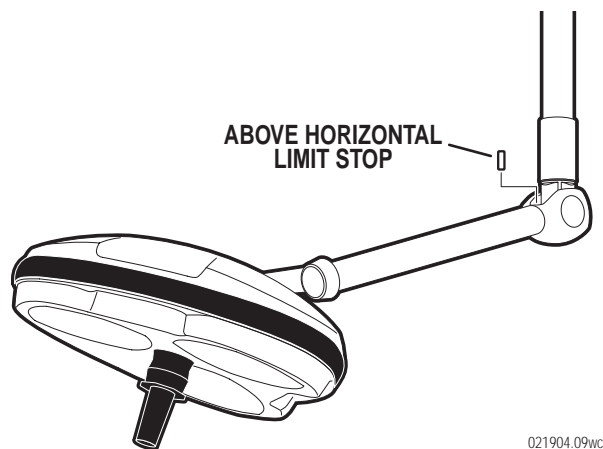


Figure 7. Above Horizontal Limit Stops

5. Wall Control

NOTE

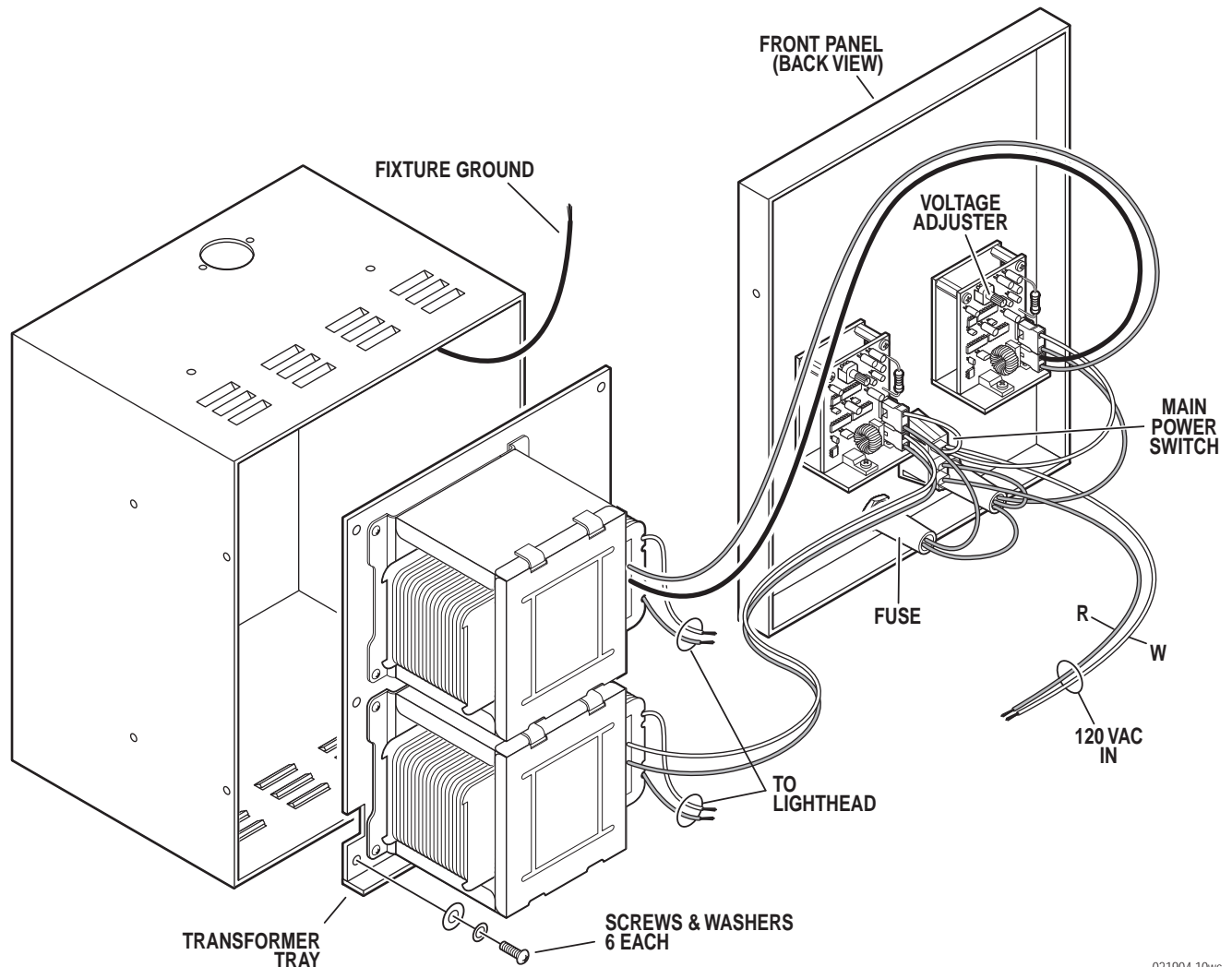
- 3/4" conduit and minimum 12AWG wire (2 wires per lighthead plus fixture ground) is required between Wall Control and Fixture.
- All wiring to be in accordance with local electrical codes.
- Control Box wires are tagged for proper connection to the fixture.

a. Install wall mounted control box using the following procedures.

b. Remove the transformer tray assembly from the wall control box for ease in wire connection. See figure 8.

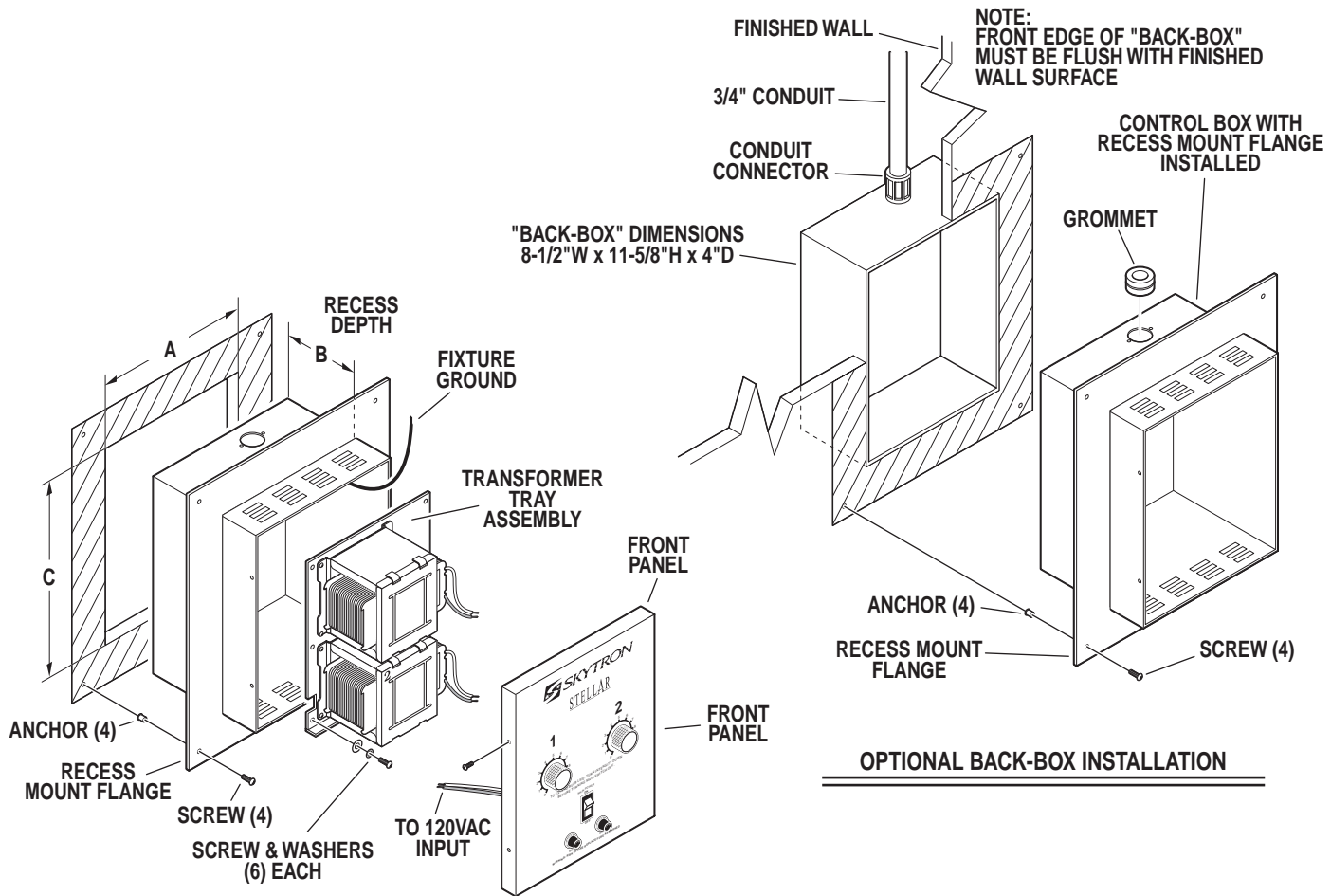
c. Install the wall control box as desired (surface or recessed mount) as shown in the wall control illustration, figure 9.

d. Observe wire tags and color codes and connect output leads to appropriate lighthead wires using crimp connectors. See figure 8.



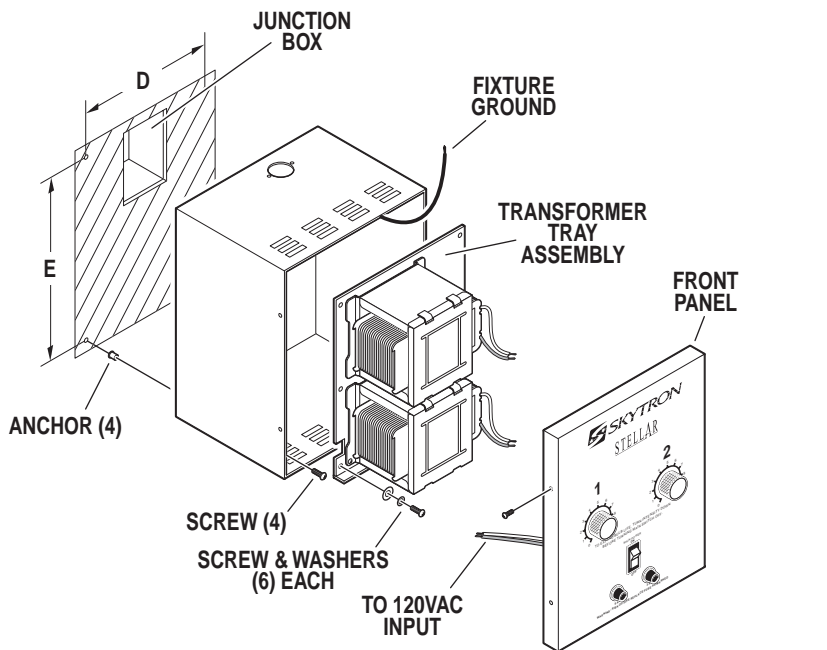
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Figure 8. Wall Control

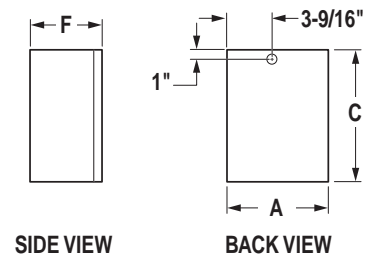


RECESSED MOUNT

DIMENSIONS	
A	8"
B	4"
C	10"
D	6-7/8"
E	7-5/8"
F	5-7/8"
RECESS MOUNT FLANGE	
11-3/4"W x 14"H	



SURFACE MOUNT



021904.11wc

Figure 9. Wall Control Installation

NOTE

120 VAC isolated power supply requires double pole, single throw 20 amp (maximum) breaker.

- e. Connect 120 VAC power supply to input wires and ground fixture properly.



CAUTION



TO AVOID BLOWING FUSES, DO NOT TURN MAIN POWER TO FIXTURE "ON" UNTIL ALL LIGHTHEADS ARE INSTALLED AND ALL WIRING CONNECTIONS ARE COMPLETED.

Output Voltage Adjustment

- a. Remove top cover from VST receptacle and test bulb voltage at the wire connections. See figure 10.

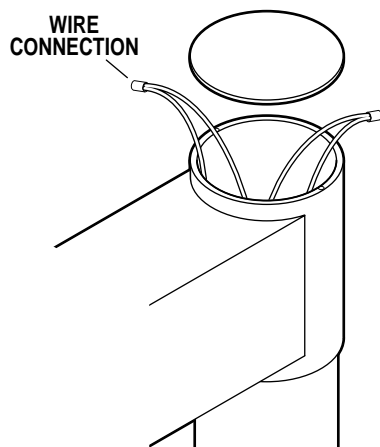


Figure 10. Top Cover Removal

- b. Turn main power "ON" and set the Dimmer Control for the lighthouse being tested to maximum intensity for the test. Output voltage (at the connectors) should be $20V \pm 0.2V$. See figure 11.

NOTE

The internal circuitry used in the Stellar system requires the use of a **true RMS type digital voltmeter** to accurately set the bulb voltage. Premature bulb failure will result from incorrect voltage.

- c. Adjust the voltage to the lighthouse by turning the adjuster on the back of the appropriate dimmer control in the wall control.

- d. Turn the adjuster clockwise to increase the output voltage, counterclockwise to decrease the voltage. See figure 12.

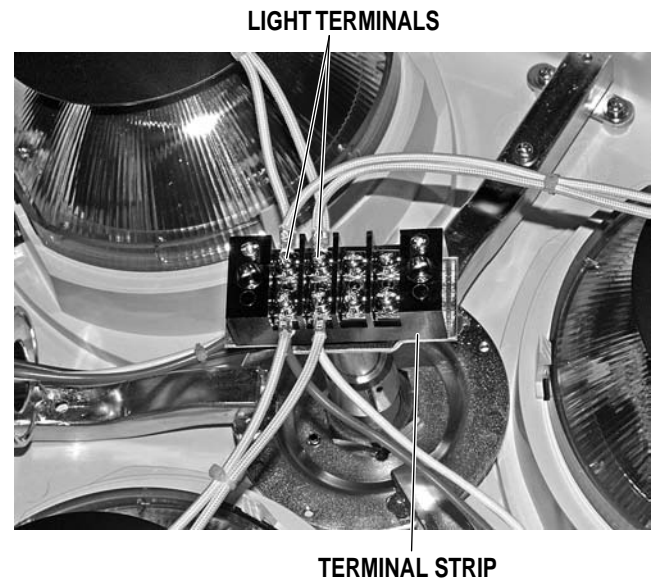


Figure 11. Bulb Voltage Test

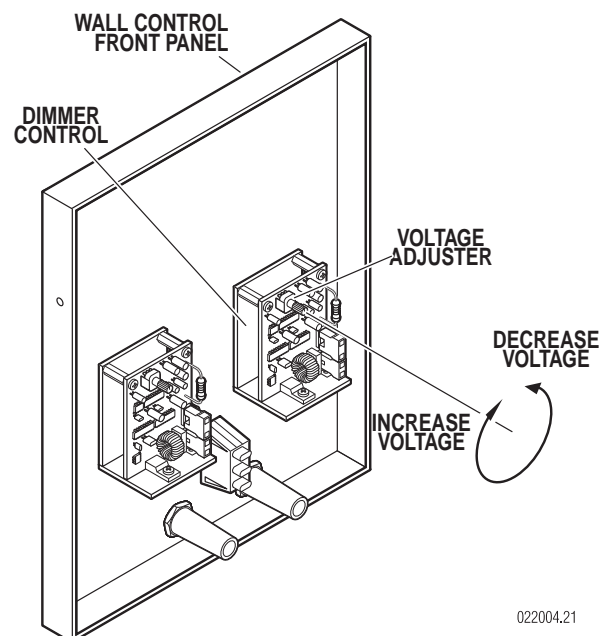
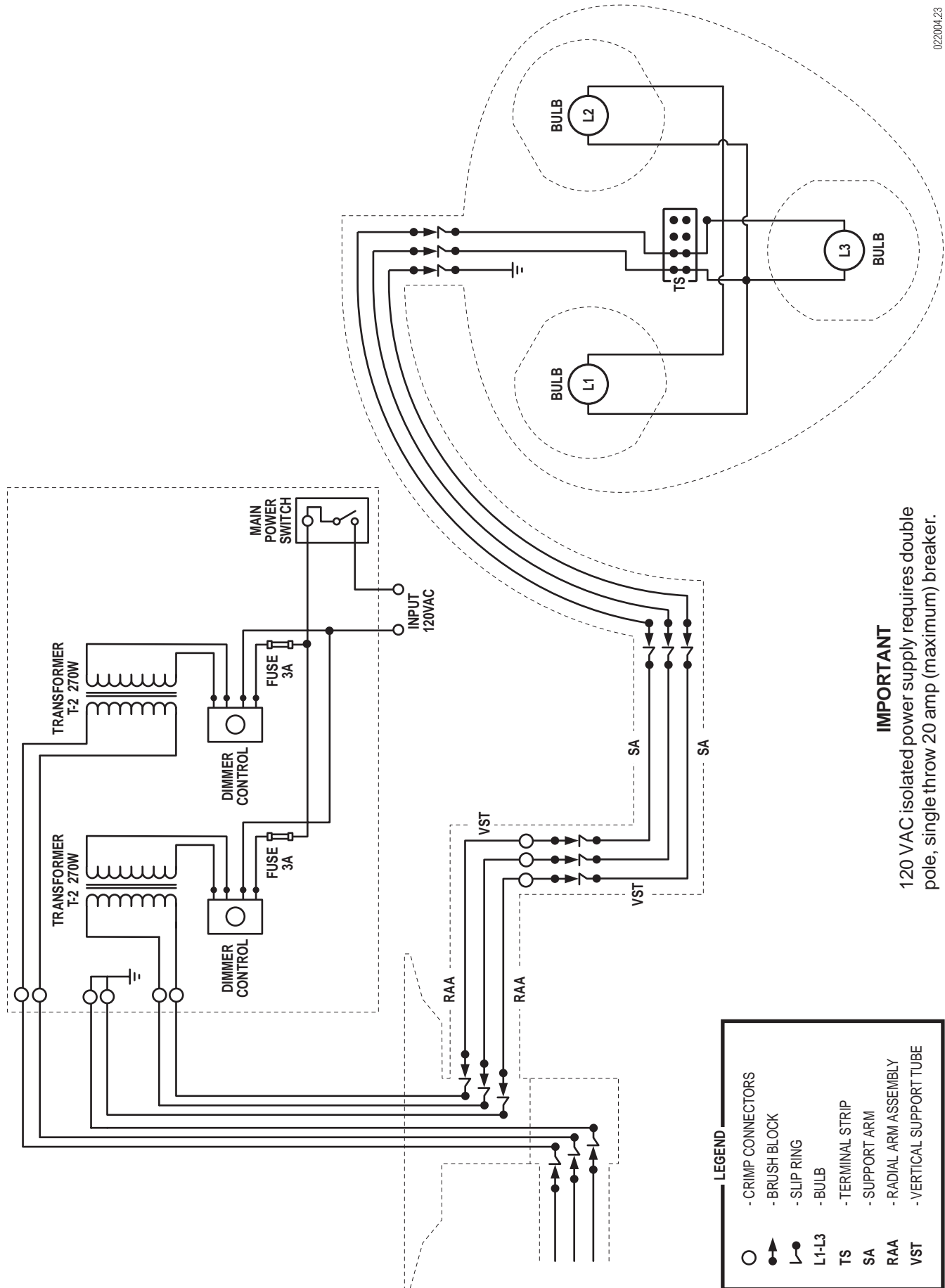


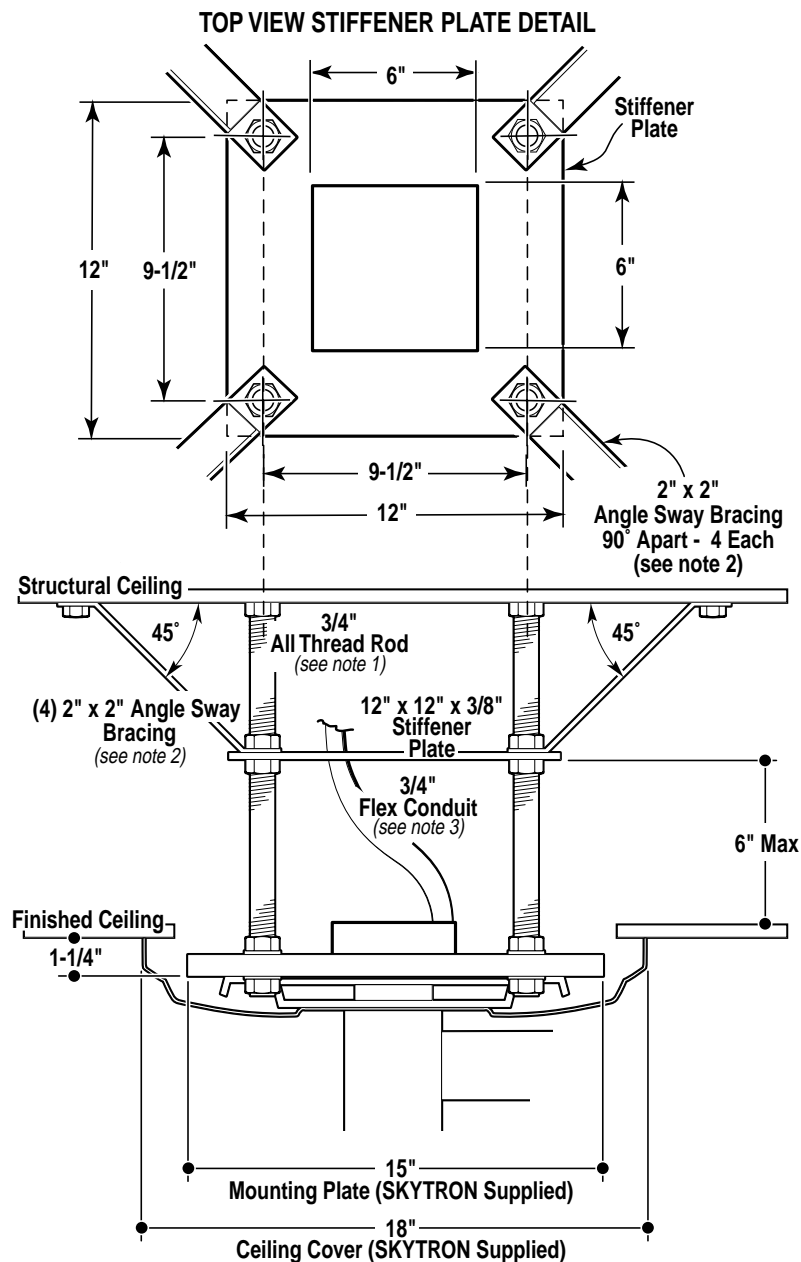
Figure 12. Voltage Adjustment

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WIRING DIAGRAM ST1919WC



022004.23



DAMAGED SHIPMENT CLAIM PROCEDURE

Whenever a shipment suffers damage while in the custody of the transportation company, the responsibility lies with the transportation company, and the value of the damages can be collected from the transportation company if the proper procedures are followed.

When a shipment is received in a damaged condition and due to the appearance of the containers such as a broken crate, torn wrapping, or smashed carton, the contents may have been damaged. That fact should be noted on the Bill of Lading offered by the transportation company. An example of an applicable statement would be; "Received in good order except as noted" or "Crate damaged, possibility of concealed damage." The addition of these types of statements on the shipping documents will automatically give grounds for starting a claim.

If damage cannot be identified on the exterior of the container, but is found when the container is opened, further unpacking should be stopped immediately and the container with all wrapping or packing materials should be held. The transportation company should be notified so an inspector can be sent. Failure to follow either of these two procedures may result in an inability to file a claim and collect for damage done. Returning the container to the sender without such an inspection may prevent filing a claim, because it will divide the responsibility for damage and in many cases the transportation company will return the shipment to the sender without charge after the inspection.

The claim itself may be filed by either the shipper or consignee, but the consignee must notify the transportation company and the shipper that the damage has occurred. Remember that refusal of the shipment or failure to note the possibility of damage on the shipping documents may jeopardize the claim. Also, acceptance of a damaged shipment which has been processed properly to allow for filing a claim, will not jeopardize the position of the consignee. In any case, SKYTRON will see that damage which is not the fault of the consignee or his agents is corrected, if the transportation company does not honor the claim, as long as SKYTRON receives the full cooperation of the consignee in filing the claim.

Some of the papers needed for filing a claim are in the hands of the consignee after the shipment has been received. If SKYTRON must file a claim, we will request these papers by name from the consignee at such time as the claim is under discussion. We will require the originals of these papers and not copies.

Knowledge of the procedures outlined above and your cooperation in submitting damaged shipment claims will help both you, our customer, and SKYTRON by assuring the integrity of our products from manufacturing to installation.

INSTALLATION CHECK LIST

Mounting Structure:

Fabrication of structure correct _____
Mounting plate set and level _____
3/4" conduit and (min) 12AWG wire _____
from fixture to wall control _____

Radial Arm Assembly:

Mounting bolts installed & tightened _____
Wiring properly connected & _____
assembly grounded _____
Ceiling cover installed _____

Vertical Support Tubes:

All BOM/VST's installed and 6 mm _____
mounting screws Loc-tited _____

Lighthead:

Mounting stub screws installed _____
Bulb Voltage checked _____
Power ON, all bulbs illuminated _____
Bulbs remain illuminated throughout:
•RAA rotation _____
•BOM rotation _____
•Pitch axis _____
•Roll axis _____
•Vertical travel _____
Center positioning handle mounted _____

Wall Control:

Wiring proper gauge _____
Wire connections correct _____
Cover screws installed _____
Input voltage checked and _____
adjusted as necessary _____

Miscellaneous:

Diffuser assemblies clean _____
Clean fixture with cleaning solution _____



5000 36th Street S.E. • Grand Rapids, MI 49512
1.800.SKYTRON • 1.616.957.0500 • FAX 1.616.957.5053